

CLAIMS

sub A2

1. Device for automatic correction of the orientation of at least one motor-vehicle (V) headlamp (P) upon variations in the attitude of the motor vehicle (V), including

- an emitter (1) projecting, onto the ground in front of the vehicle (V), two light spots (T_1, T_2) which are spaced apart in a direction parallel to the longitudinal axis of the vehicle (V),
- a sensor (2) of the illumination of the light spots (T_1, T_2) comprising an objective (3) forming an image (I_1, I_2) of the light spots (T_1, T_2) on a receiver (6) and supplying an output signal (dc_1, dc_2) for each one,
- processing means (5) suitable for deriving a control signal from the output signal from the sensor (2), and
- an actuator (4) controlled by the control signal and able to alter the elevation orientation of a reflector (R) of the headlamp (P), characterised in that the control signal for the actuator (4) is derived by the processing means (5) on the basis of a linear function of the output signals (dc_1, dc_2) supplied by the sensor (2) for each image (I_1, I_2) of each light spot (T_1, T_2).

2. Device according to Claim 1, characterised in that the linear function between the output signals (dc_1, dc_2) from the sensor (2) for each image (I_1, I_2) of each light spot (T_1, T_2) is of the form:

these constants are unclear

$$dc_1 - a \times dc_2 = K \times (\theta - \theta_0) + b$$

where a, b and θ_0 are constants characteristic of the geometry of the correction device, θ is an angle representative of the attitude of the vehicle (V), and where K is a magnitude representative of the height of the vehicle.

what geometry?

what attitude?

horizontal + vertical

3. Device according to Claim 1, characterised in that the emitter (1) and the sensor (2) are fixed with respect to one another.

4. Device according to Claim 3, characterised in that the emitter (1) and the sensor (2) are integral with a movable part (R) of the vehicle.

5. Device according to Claim 4, characterised in that the movable part (R) of the vehicle consists of the reflector (R) of a headlamp (P) of the vehicle.

6. Device according to Claim 3, characterised in that the emitter (1) and the sensor (2) are fixed with respect to the vehicle.

All variables must be fully described

7. Device according to Claim 1, characterised in that the emitter (1) and the sensor (2) are situated one on a fixed part of the vehicle, the other on a movable part of the vehicle.

8. 5 Device according to Claim 1, characterised in that the light spots (T_1 , T_2) define a straight-line segment substantially parallel to the longitudinal axis of the vehicle.

9. Device according to Claim 1, characterised in that the emitter (1) and the sensor (2) are situated substantially in the same vertical plane.

10. 10 Device according to Claim 1, characterised in that the direction of illumination of the emitter (1) and the optical axis of the sensor (2) are contained in the same vertical plane parallel to the longitudinal axis of the vehicle.